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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,257	10/30/2003	William W. Cheng	03T004	2940

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EXAMINER

WELLS, KENNETH B

ART UNIT	PAPER NUMBER
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2816

MAIL DATE	DELIVERY MODE
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09/24/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/698,257	Applicant(s) CHENG ET AL.	
	Examiner Kenneth B. Wells	Art Unit 2816	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28,29,33,35 and 37-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28, 29, 33, 35 and 37-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. The RCE and preliminary amendments filed on 8/31/07 have been entered in the case.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. Claims 28, 29, 33, 35 and 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art in view of Baskett.

See the rejection set forth in paragraph eight of the 3/19/07 examiner's answer for the details of this rejection. As to the newly recited limitations that the first and second summing busses are analog having first ends coupled to ground and other ends coupled to the collectors of the cascode transistors, this does not distinguish over applicant's admitted prior art in view of Baskett because such will clearly be the case when the admitted prior art circuitry of Fig. 1 is combined with the above-noted teachings of Baskett, i.e., the summing busses 16 and 18 have first ends coupled to ground (via resistors RL, just as in applicant's invention shown in instant

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Fig. 3) and when the cascode BJTs 12 and 14 of Baskett are added to the circuit of instant Fig. 1, they will be respectively coupled between the collectors of the first differential pair Q1, Q2 and the summing busses 16, 18 and also between the collectors of the second differential pair Q3, Q4 and the summing busses 16, 18.

Response to Arguments

4. Applicant's arguments filed on 8/31/07 have been fully considered but they are not persuasive.

The first argument, that "there is no motivation to combine Baskett with the admitted prior art", is not persuasive because there are many different benefits/advantages that will be obtained from using the Baskett Fig. 1 current steering cell, see the previous office actions which clearly point these out. Such advantages of Baskett's Fig. 1 current steering cell include, inter alia, reduced skew and jitter, superior noise immunity via common mode rejection of cross-talk noise and EMI radiation, reduced Miller capacitance effects at the input nodes, reduced voltage variations at the output nodes, faster switching speed, etc. Applicant's argument that the ordinary artisan would not be motivated to use such an advantageous current steering cell in place of the current steering cells 12

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and 14 of the admitted prior art Fig. 1 is therefore not persuasive in view of the many salient reasons described by Baskett for using such a beneficial current steering circuit. It appears that perhaps applicant has misunderstood the grounds of rejection set forth in the previous office actions and the in examiner's answer (i.e., that the rejection is a simple replacement of each of the current steering cells 12 and 14 of instant Fig. 1 with the improved current steering cell disclosed in Fig. 1 of Baskett).

The further arguments based on the Supreme Court decision in KSR International Co. v. Teleflex, Inc. are similarly not persuasive, i.e., if anything the holding in that case supports the propriety of the above-noted obviousness rejection. This is because not only is there explicit motivation to make the combination of admitted prior art Fig. 1 and Baskett's Fig. 1, there is also the implicit "obvious to try" motivation to replace a basic current steering cell (such as that shown in instant Fig. 1) with an improved current steering cell (such as the one shown in Fig. 1 of Baskett).

The further arguments concerning the purpose of the invention (i.e., it reduces non-linear switching time characteristics) are similarly not persuasive because, as applicant is well aware, even if Baskett and the admitted prior

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art fail to mention such a purpose (or result), this will not preclude combining their teachings where there is clear explicit and implicit motivation to do so.

The further arguments regarding the analog output vs. digital output difference that applicant again attempts to argue has already been addressed and found to not be persuasive, for the reasons noted in the previous office actions and also noted again in the examiner's answer.

The further comments in the 1.132 declaration concerning experiments and tests have been noted by the examiner but are not sufficient to overcome the strong motivation that exists for any person having ordinary skill in the art to replace a basic current steering cell (such as that shown in instant Fig. 1) with an improved current steering cell (such as the one shown in Fig. 1 of Baskett). Such experimental data can of course be a relevant factor when there is a close case of obviousness or nonobviousness of a claimed invention, and have been carefully considered by the examiner. However, in the instant case, because there are so many reasons and benefits which would motivate the ordinary artisan to use the improved current steering cell of Baskett in place of the basic current steering cells 12, 14 shown in instant Fig. 1, the secondary

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considerations of experiments and tests does not outweigh the explicit and implicit motivation described above.

The final argument that "the present invention is novel" makes no sense because the outstanding rejection is not based on anticipation (i.e., 35 U.S.C. 102), but rather obviousness under 35 U.S.C. 103.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth B. Wells whose telephone number is (571)272-1757. The examiner can normally be reached on Monday through Friday from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew N. Richards, can be reached at (571)272-1736. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through

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/Kenneth B. Wells/
Primary Examiner
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September 17, 2007